

IN THE CLAIMS:

1-4. (Cancelled)

5. (Currently Amended) A composition comprising:

a cyclodextrin-containing polymer,

a therapeutic agent, and

a complexing agent, comprising:

~~at least one functional group, and~~

at least one host/guest moiety at a terminus of the complexing agent that forms an inclusion complex with a host/guest moiety of said cyclodextrin-containing polymer, and wherein the complexing agent comprises

at least one polymer portion that increases solubility and/or imparts stabilization relative to a composition of the cyclodextrin-containing polymer and therapeutic agent alone; and

wherein the cyclodextrin-containing polymer, the therapeutic agent, and the complexing agent are separate molecules.

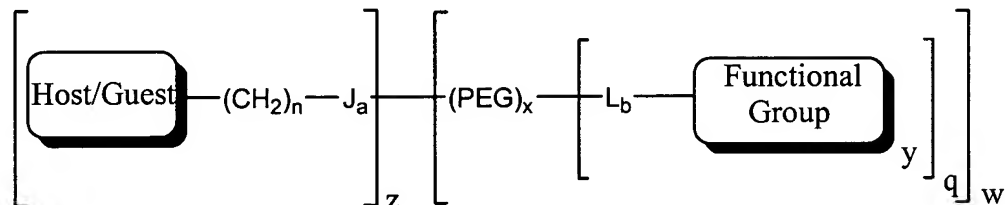
6. (Previously Presented) A composition of claim 5, wherein said therapeutic agent is selected from an antibiotic, a steroid, a polynucleotide, small molecule pharmaceutical, a virus, a plasmid, a peptide, a peptide fragment, a chelating agent, a biologically active macromolecule, and mixtures thereof.

7. (Original) A composition of claim 6, wherein said therapeutic agent is a polynucleotide.

8-10. (Cancelled)

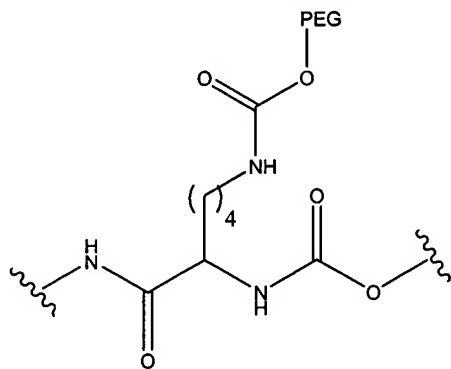
11. (Previously Presented) A composition of claim 5, wherein the host/guest of the complexing agent is selected from adamantyl, naphthyl, cholesterol, cyclodextrin, and mixtures thereof.

12. (Previously Presented) A composition of claim 5, wherein the complexing agent is a compound of the formula:



wherein

J is $-\text{NH}-$, $-\text{C}(=\text{O})\text{NH}-\text{CH}_2)_d-$, $-\text{NH}-\text{C}(=\text{O})-(\text{CH}_2)_d-$, $-\text{CH}_2\text{SS}-$, $-\text{C}(=\text{O})\text{O}-(\text{CH}_2)_e-\text{O}-\text{P}(=\text{O})(\text{O}-$



$(\text{CH}_2)_e-\text{Y})\text{O}-$,

, a peptide or polypeptide residue, or

$-\text{NH}-(\text{C}=\text{O})-\text{CH}(\text{R}^1)-\text{NH}-(\text{C}=\text{O})-\text{CH}(\text{R}^1)-\text{NH}-$;

Y is an additional host-guest functionality;

R^1 is $-(\text{CH}_2)-\text{CO}_2\text{H}$, an ester or salt thereof; or $-(\text{CH}_2)_a-\text{CONH}_2$;

PEG is $-\text{O}(\text{CH}_2\text{CH}_2\text{O})_z-$, where z varies from 2 to 500;

L is H, $-\text{NH}-$, $-\text{NH}-(\text{C}=\text{O})-(\text{CH}_2)_e-(\text{C}=\text{O})-\text{CH}_2-$, $-\text{S}(=\text{O})_2-\text{HC}=\text{CH}-$, $-\text{SS}-$, $-\text{C}(=\text{O})\text{O}-$, or a carbohydrate residue;

a is 0 or 1;

b is 0 or 1;

d ranges from 0 to 6;

e ranges from 1 to 6;

n ranges from 0 to 6;

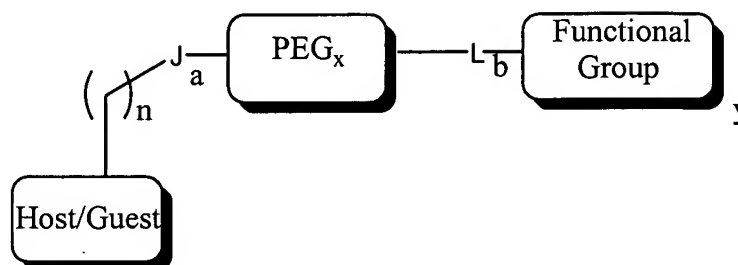
q ranges from 1 to 5;

w ranges from 1 to 5;

y is 1; and

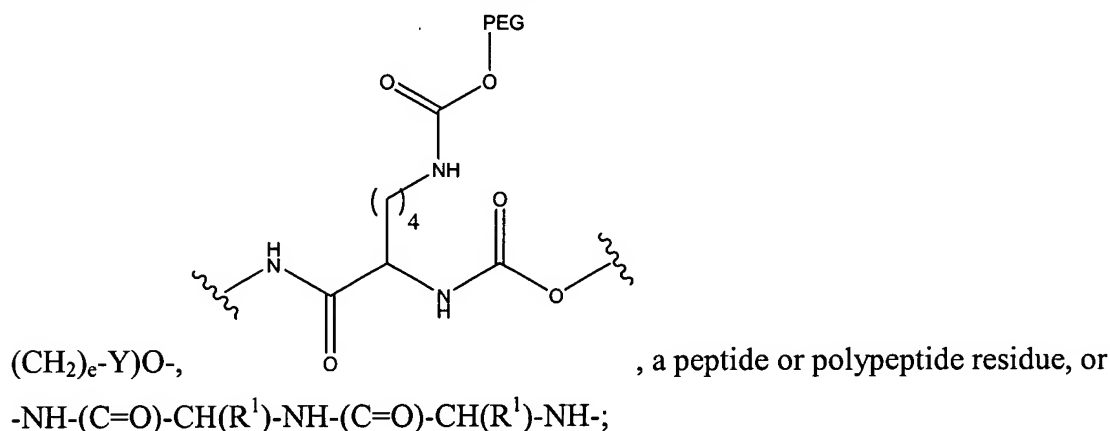
x is 0 or 1.

13. (Previously Presented) A composition of claim 5, wherein the complexing agent is a compound of the formula:



wherein

J is $-\text{NH}-$, $-\text{C}(=\text{O})\text{NH}-\text{CH}_2)_d-$, $-\text{NH}-\text{C}(=\text{O})-(\text{CH}_2)_d-$, $-\text{CH}_2\text{SS}-$, $-\text{C}(=\text{O})\text{O}-(\text{CH}_2)_e-\text{O}-\text{P}(=\text{O})(\text{O}-$



Y is an additional host-guest functionality;

R^1 is $-(\text{CH}_2)-\text{CO}_2\text{H}$, an ester or salt thereof; or $-(\text{CH}_2)_a-\text{CONH}_2$;

PEG is $-\text{O}(\text{CH}_2\text{CH}_2\text{O})_z-$, where z varies from 2 to 500;

L is H, $-\text{NH}-$, $-\text{NH}-(\text{C}=\text{O})-(\text{CH}_2)_e-(\text{C}=\text{O})-\text{CH}_2-$, $-\text{S}(=\text{O})_2-\text{HC}=\text{CH}-$, $-\text{SS}-$, $-\text{C}(=\text{O})\text{O}-$, or a carbohydrate residue;

a is 0 or 1;

b is 0 or 1;

d ranges from 0 to 6;

e ranges from 1 to 6;

n ranges from 0 to 6;

y is 1; and

x is 0 or 1.

14. (Currently Amended) A composition of claim 5, wherein ~~at least one functional group includes the complexing agent further comprises~~ a group selected from a ligand, a nuclear localization signal, an endosomal release peptide, an endosomal release polymer, or a membrane permeabilization agent.
15. (Currently Amended) A composition of claim 5, wherein ~~the polymer portion at least one functional group includes a moiety that~~ increases the solubility of the composition under biological conditions relative to a composition of the cyclodextrin-containing polymer and therapeutic agent alone.
16. (Currently Amended) A composition of claim 5, wherein ~~the polymer portion at least one functional group includes a moiety that~~ stabilizes the composition under biological conditions relative to a composition of the cyclodextrin-containing polymer and therapeutic agent alone.
17. (Currently Amended) A composition of claim 5, wherein ~~at least one functional group includes the complexing agent further comprises~~ a therapeutic agent reversibly bound to the complexing agent.
18. (Previously Presented) A composition of claim 5, wherein the complexing agent further comprises a spacer group.
19. (Cancelled)
20. (Withdrawn) A composition of claim 5, wherein the cyclodextrin-containing polymer comprises at least one guest moiety that forms an inclusion complex with at least one host moiety of the complexing agent.
21. (Withdrawn) A composition of claim 20, wherein at least one guest moiety is an adamantyl group and at least one host moiety is a cyclodextrin moiety.
22. (Cancelled)

23. (Previously Presented) A composition of claim 5, wherein at least one polymer portion of the complexing agent comprises PEG or derivatives thereof.

24-25. (Cancelled)

26. (Previously Presented) A composition of claim 24, wherein at least one polymer portion of the complexing agent comprises PEG or derivatives thereof.

27. (Currently Amended) A composition of claim 5, wherein the cyclodextrin-containing polymer comprises one or more cyclodextrins in the side chains of the cyclodextrin-containing polymer.

28. (Previously Presented) A composition of claim 5, wherein the cyclodextrin-containing polymer comprises a linear cyclodextrin-containing polymer wherein cyclodextrin moieties are present in the backbone of the polymer.

29. (New) A composition of claim 5, wherein the polymer portion increases solubility and/or imparts stabilization is under biological conditions.

30. (New) A composition comprising:

a cyclodextrin-containing polymer,

a therapeutic agent, and

a complexing agent, comprising:

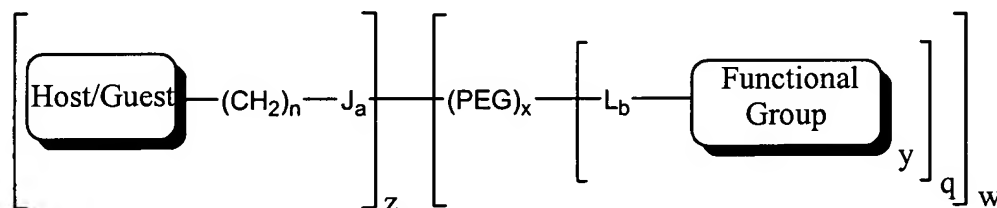
at least one functional group,

at least one host/guest moiety at a terminus of the complexing agent that forms an inclusion complex with a host/guest moiety of said cyclodextrin-containing polymer, and

at least one polymeric spacer group;

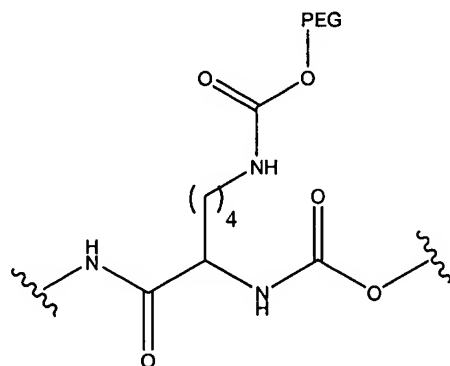
wherein the cyclodextrin-containing polymer, the therapeutic agent, and the complexing agent are separate molecules.

31. (New) A composition of claim 30, wherein said therapeutic agent is selected from an antibiotic, a steroid, a polynucleotide, small molecule pharmaceutical, a virus, a plasmid, a peptide, a peptide fragment, a chelating agent, a biologically active macromolecule, and mixtures thereof.
32. (New) A composition of claim 31, wherein said therapeutic agent is a polynucleotide.
33. (New) A composition of claim 30, wherein the host/guest of the complexing agent is selected from adamantyl, naphthyl, cholesterol, cyclodextrin, and mixtures thereof.
34. (New) A composition of claim 30, wherein at least one spacer group of the complexing agent comprises PEG or derivatives thereof.
35. (New) A composition of claim 34, wherein the complexing agent is a compound of the formula:



wherein

J is $-\text{NH}-$, $-\text{C}(=\text{O})\text{NH}-\text{CH}_2-$, $-\text{NH}-\text{C}(=\text{O})-(\text{CH}_2)_d-$, $-\text{CH}_2\text{SS}-$, $-\text{C}(=\text{O})\text{O}-(\text{CH}_2)_e-\text{O}-\text{P}(=\text{O})(\text{O}-$



$(\text{CH}_2)_e-\text{Y})\text{O}-$,

, a peptide or polypeptide residue, or

$-\text{NH}-(\text{C}=\text{O})-\text{CH}(\text{R}^1)-\text{NH}-(\text{C}=\text{O})-\text{CH}(\text{R}^1)-\text{NH}-$;

Y is an additional host-guest functionality;

R^1 is $-(\text{CH}_2)-\text{CO}_2\text{H}$, an ester or salt thereof; or $-(\text{CH}_2)_a-\text{CONH}_2$;

PEG is $-\text{O}(\text{CH}_2\text{CH}_2\text{O})_z-$, where z varies from 2 to 500;

L is H, -NH-, -NH-(C=O)-(CH₂)_e-(C=O)-CH₂-, -S(=O)₂-HC=CH-, -SS-, -C(=O)O-, or a carbohydrate residue;

a is 0 or 1;

b is 0 or 1;

d ranges from 0 to 6;

e ranges from 1 to 6;

n ranges from 0 to 6;

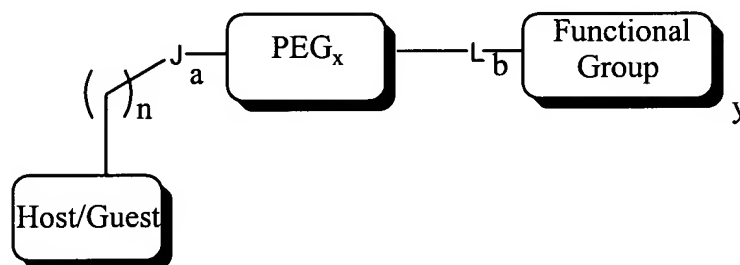
q ranges from 1 to 5;

w ranges from 1 to 5;

y is 1; and

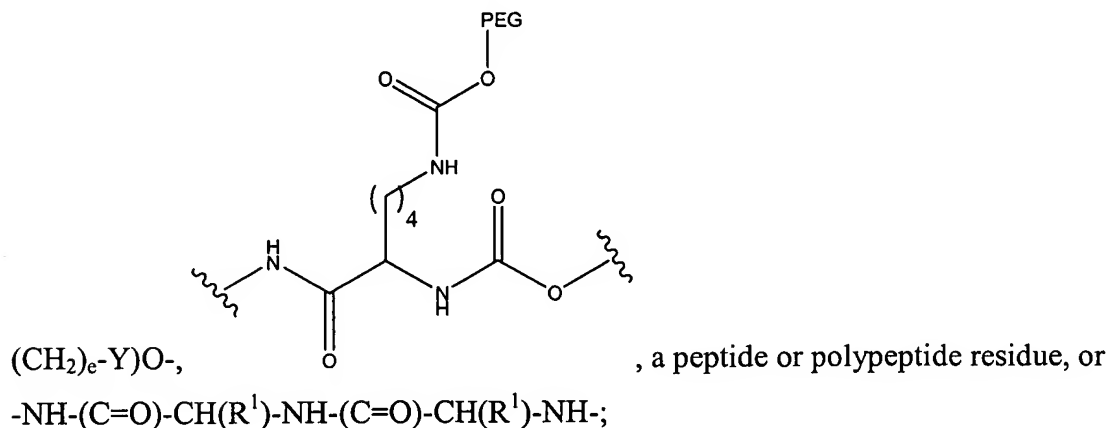
x is 1.

36. (New) A composition of claim 34, wherein the complexing agent is a compound of the formula:



wherein

J is -NH- , $\text{-C(=O)NH-CH}_2\text{)}_d\text{-}$, $\text{-NH-C(=O)-(CH}_2\text{)}_d\text{-}$, $\text{-CH}_2\text{SS-}$, $\text{-C(=O)O-(CH}_2\text{)}_e\text{-O-P(=O)(O-}$



Y is an additional host-guest functionality;

R^1 is $-(CH_2)-CO_2H$, an ester or salt thereof; or $-(CH_2)_a-CONH_2$;

PEG is $-O(CH_2CH_2O)_z-$, where z varies from 2 to 500;

L is H , $-NH$, $-NH-(C=O)-(CH_2)_e-(C=O)-CH_2-$, $-S(=O)_2-HC=CH-$, $-SS-$, $-C(=O)O-$, or a carbohydrate residue;

a is 0 or 1;

b is 0 or 1;

d ranges from 0 to 6;

e ranges from 1 to 6;

n ranges from 0 to 6;

y is 1; and

x is 1.

37. (New) A composition of claim 30, wherein at least one functional group includes a group selected from a ligand, a nuclear localization signal, an endosomal release peptide, an endosomal release polymer, or a membrane permeabilization agent.

38. (New) A composition of claim 30, wherein at least one functional group includes a moiety that increases the solubility of the composition under biological conditions relative to a composition of the cyclodextrin-containing polymer and therapeutic agent alone.

39. (New) A composition of claim 30, wherein at least one functional group includes a moiety that stabilizes the composition under biological conditions relative to a composition of the cyclodextrin-containing polymer and therapeutic agent alone.

40. (New) A composition of claim 30, wherein at least one functional group includes a therapeutic agent reversibly bound to the complexing agent.

41. (New) A composition of claim 30, wherein the cyclodextrin-containing polymer comprises one or more cyclodextrins in side chains of the cyclodextrin-containing polymer.

42. (New) A composition of claim 30, wherein the cyclodextrin-containing polymer comprises a linear cyclodextrin-containing polymer wherein cyclodextrin moieties are present in the backbone of the polymer.